AMENDMENTS TO CLAIMS

1. (Original) A method of detecting an edge in a digital image block, the method comprising determining an entropy of pixel differences in the block.

2. (Original) The method of claim 1, wherein the entropy is computed by creating a histogram of the pixel luminance differences in the block; and computing the entropy of the histogram.

3. (Original) The method of claim 2, wherein entropies for bins of the histogram are pre-computed and stored in a lookup table; and wherein the lookup table is used to determine the entropy of the histogram.

4. (Original) The method of claim 3, wherein entries of the lookup table are scaled and rounded to integers.

5. (Original) The method of claim 1, further comprising determining a maximum pixel difference in the block.

6. (Original) The method of claim 5, further comprising comparing the entropy and maximum difference to thresholds to determine whether the block contains an edge.

7. (Original) The method of claim 5, wherein a block containing edges is identified by a low entropy and a high maximum difference.

8. (Original) The method of claim 5, wherein the block is identified as not having an edge if the maximum difference is zero.

9. (Original) The method of claim 1, wherein the entropy is computed according to the function

$$E(h) = \log(T) - \frac{1}{T} \sum_{h_n \neq 0} h_n \log(h_n).$$

10. (Original) The method of claim 9, wherein the entropy function is normalized.

11. (Original) Apparatus for detecting edges in an image block by determining entropies of pixel differences in the block.

12. (Original) The apparatus of claim 11, wherein the apparatus includes a processor for creating a histogram of the pixel luminance differences in the block; and computing the entropy of the histogram.

13. (Original) The apparatus of claim 12, wherein the processor includes a look-up table of pre-computed bin entropies a function of bin height; and wherein the processor looks up entropies for bins of the histogram and sums the bin entropies to determine the entropy of the histogram.

14. (Original) The apparatus of claim 12, wherein the processor also determines a maximum pixel difference in the block.

15. (Original) The apparatus of claim 14, wherein the processor compares the entropy and maximum difference to thresholds to determine whether the block contains an edge.

16. (Original) The apparatus of claim 15, wherein the processor identifies a block having low entropy and a high maximum difference as a block containing at least one edge.

17. (Original) The apparatus of claim 11, wherein the processor computes the entropy according to the function

$$E(h) = \log(T) - \frac{1}{T} \sum_{h_n \neq 0} h_n \log(h_n).$$

18. (Original) The apparatus of claim 17, wherein the processor uses a normalized version of the entropy function to detect whether the block contains at least one edge.

19. (Currently amended) An article for a processor, the article comprising:
[computer] memory; and
a program stored in the memory, the program, when executed, causing the processor to determine whether an image block contains an edge by determining an entropy of pixel luminance differences in the block.

20. (Original) The article of claim 19, wherein the program also causes the processor to determine a maximum pixel difference in the block and use the maximum difference to determine whether the block contains at least one edge.

21. (New) The article of claim 20, wherein a block containing edges is identified by a low entropy and a high maximum difference.

22. (New) The article of claim 20, wherein the block is identified as not having an edge if the maximum difference is zero.

23. (New) The article of claim 19, wherein the entropy is computed according to the function

$$E(h) = \log(T) - \frac{1}{T} \sum_{h_n \neq 0} h_n \log(h_n).$$

24. (Original)   The article of claim 23, wherein the entropy function is normalized.

25. (New) The article of claim 19, wherein the entropy is computed by creating a histogram of the pixel luminance differences in the block; and computing the entropy of the histogram.

26. (New) The article of claim 25, wherein entropies for bins of the histogram are pre-computed and stored in a lookup table; and wherein the lookup table is used to determine the entropy of the histogram.

27. (New) The article of claim 26, wherein entries of the lookup table are scaled and rounded to integers.

28. (New) A method of detecting an edge in a digital image block, the method comprising determining an entropy of a histogram of the block.

29. (New) Apparatus comprising a processor for performing the method of claim 28.

30. (New) An article comprising memory encoded with data for causing a processor to perform the method of claim 28.